

## ABSTRACT OF THE DISCLOSURE

A system for workload placement among data centers includes a plurality of grid resource allocation managers (GRAMs), wherein the GRAMs are configured to obtain information from the data centers. The system also includes an information service configured to receive  
5 information from the plurality of GRAMs and a broker configured to receive an application request and to determine resource requirements from the application request, wherein the broker is configured to determine which of the data centers contains adequate resources to perform the requested application. The system further includes a co-allocator configured to receive  
information pertaining to the data centers having the adequate resources, wherein the co-allocator  
10 is further configured to select one of the data centers to perform the requested application based upon energy efficiency characteristics of the data centers.